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10/665,159	09/22/2003	Norifumi Furuta	117152	6337
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 6, filed May 25, 2007, with respect to claims 9 and 21 have been fully considered and are persuasive. The 112 rejection of claims 9 and 21 has been withdrawn.
2. Applicant's arguments filed May 25, 2007 have been fully considered but they are not persuasive. Regarding the Olarig reference, Clark teaches a control circuit which controls the state of electrical connection between the high voltage distribution box and external equipment. Clark also states that the control circuit provides for safe connection and disconnection of the connector (motivation). He fails to explicitly teach the precise moment at which the state of the electrical connection will change. Clark teaches that it will change to a connected state after the control circuit is "fully connected" and change to a disconnected state after the control circuit is "fully disconnected." (Col. 2, lines 35-44) This teaching is vague as to the precise meaning of "fully (dis)connected". Olarig teaches a precise moment at which the state of the electrical connection between a main device and a peripheral device will change (i.e. when the lever (18) is opened/closed). Therefore, Olarig is reasonably pertinent to the particular problem with which the inventor is involved (i.e. when the electrical connection changes state) and is therefore analogous art. The technical area that is being addressed is the comparison between a physical connection and an electrical connection of a connector, and the timing at which each event occurs. The motivation is taught in Clark.

Regarding the Applicant's assessment of Olarig's lever (18), Olarig teaches a lever that when moved to a closed position after the physical connection has been made, it locks the

Art Unit: 2836

connection in place (i.e. the attaching means of the present invention; Col. 3, lines 45-50). He also teaches when the lever is moved to an open position (i.e. detachment of the attaching means), the controller (12) changes the state of electrical connection to a disconnected state (Col. 5, lines 33-37). Therefore, if/when the combination of references is made, all of the limitations will be satisfied. The only modification to Clark that Olarig teaches is *when* the state of electrical connection between a main device and a piece of external equipment changes. The fact that Olarig sends a signal to the computer to proceed where the memory stabilization, system configuration, and power are controlled to operate is moot, since these teachings are NOT being modified into Clark's (the main reference) invention. Both Olarig's lever (18) and Clark's cam lever (44) are synonymous and can be considered the attaching means of their respective inventions.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2836

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5, 9, 13, 17, 21, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (5,913,691) and Olarig et al. (6,587,909). Clark teaches a high-voltage equipment housing comprising connection means (male and female connectors; the female connector being attached to the housing) for making an electrical connection to external equipment. He also teaches an attaching means (cam lever and locking means) to prevent the mechanical connection of said connection means from being released by said connection means only, and the cam lever, once secured, prevents the connection means from being touched (Col. 2, lines 26-29). He also teaches a changing means (control circuit, 70) which controls the state of electrical connection between the high voltage distribution box and external equipment. Clark also teaches that the changing means provides for safe connection and disconnection of the connector (Col. 2, lines 35-44). He also teaches the high voltage housing in a vehicle, therefore it would be inherent that there is holding means for mounting the equipment on a vehicle (Fig. 27). It is also inherent that the connection means are positioned to be touchable by a hand of a person, when not prevented by said attaching means, since the cam lever and locking means need to be moved into place to secure the connections. Clark fails to teach the precise moment at which the state of the electrical connection changes. Olarig teaches a connection means (16), attaching means (18), and a changing means (CPU, 12). The changing means teaches changing the state of connection between a system (10) and external equipment (14) to a disconnected state when the attaching means is detached (Col. 3, lines 46-50; Col. 5, lines 28-37). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the

Art Unit: 2836

timing concept of Olarig's changing means into Clark's invention, so that the connection and disconnection of the external equipment in Clark's invention can be done as safely as possible to minimize the possibility of an electrocution or shock.

6. Claims 2, 6, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (5,913,691) and Olarig et al. (6,587,909) as applied to claims 1 and 13 above, and further in view of Heberlein et al. (6,361,356). Clark and Olarig teach a high voltage housing as described above. Clark fails to teach an interlock circuit attached to said attaching means. Heberlein teaches an electrical connector used in automobiles. He teaches the connector comprising an interlock circuit (56) attached to attaching means (arm lever, 16) and when the state of the electrical connection changes to disconnected state is when the interlock circuit opens in response to detachment of said attaching means (Col. 4, lines 7-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to add an interlock circuit into Clark's invention so that it can visually notify operators that a connection has been securely made between two devices.

7. Claims 3, 7, 15, 19, 26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (5,913,691) and Olarig et al. (6,587,909) as applied to claims 1, 13, and 14 above, and further in view of Saitoh et al. (5,274,722). Clark and Olarig teach a high-voltage housing with connectors as described above. Clark also teaches an upper lid on the high voltage distribution box. These references fail to teach a prevention means for the upper lid of the housing. Saitoh teaches a housing structure with an upper lid (9) having prevention means (hooks, 11) connected to the housing for preventing the upper lid from being detached once the connector has been connected (Fig. 6). It would have been obvious to one of ordinary skill in the

Art Unit: 2836

art at the time of the invention to implement this preventing means for a housing into Clark's invention so that it makes the housing safer for users so that the inner equipment can't be touched unless the connectors are disconnected, which eliminates the possibility of electrocution.

8. Claims 4, 8, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (5,913,691), Olarig et al. (6,587,909), and Heberlein et al. (6,361,356) as applied to claims 1, 2, 13, and 14 above, and further in view of Saitoh et al. (5,274,722). Clark, Olarig and Heberlein teach a high-voltage housing with connectors as described above. Clark also teaches an upper lid on the high voltage distribution box. These references fail to teach a prevention means for the upper lid of the housing. Saitoh teaches a housing structure with an upper lid (9) having prevention means (hooks, 11) connected to the housing for preventing the upper lid from being detached once the connector has been connected (Fig. 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement this preventing means for a housing into Clark's invention so that it makes the housing safer for users so that the inner equipment can't be touched unless the connectors are disconnected, which eliminates the possibility of electrocution.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2836

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

8-15-2007

A handwritten signature in black ink, appearing to read 'M. Sherry', is written over a date stamp that reads '8/15/07'.

MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER